



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,780	04/14/2004	Yasuyuki Kojima	101077.53988US	4691

23911 .7590 08/13/2007
CROWELL & MORING LLP
INTELLECTUAL PROPERTY GROUP
P.O. BOX 14300
WASHINGTON, DC 20044-4300

EXAMINER

KOCA, HUSEYIN

ART UNIT	PAPER NUMBER
----------	--------------

3744

MAIL DATE	DELIVERY MODE
-----------	---------------

08/13/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. H	Applicant(s)	
	10/823,780	KOJIMA ET AL.	
	Examiner Huseyin Koca	Art Unit 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 and 15-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Newly submitted claims 15-24 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: claim 15 recites new patentably distinct limitations regarding indoor units being divided into plural groups and each group having a blocking filter; claim 20 recites new patentably distinct limitations regarding indoor units being divided into plural groups and each group having a blocking filter, and also control information is being exchanged mutually between at least one outdoor unit and the bridges via leased communication line.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 15-24 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "Indoor and Outdoor Unit Communication via Signal From a Power Line."

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3744

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bunkou

et al. (JP-A-2002-243248) in view of Roh (6,430,953), and further in view of

Polkinghorne (4,843,833).

In regard to claim 11, Bunkou et al. teach an air conditioning system having indoor units (8), an outdoor unit (7), and a system controller (10) for controlling the indoor or the outdoor unit by executing communications as transmitting a signal via power line supplying electric power (0018, line 1; 0024, line 2-8); leased communication line for connecting outdoor unit with the system controller (0015, line 8-12; 0025, lines 1-2); power line communication is provided from the indoor unit via power line (0019, line 5-8); a bridge (6) is used for connecting the communication lines (0020, line 3-8); control information is exchanged mutually between the indoor unit, outdoor unit, and the system controller (0024, line 2-9); and a network configuration (0015, line 12). Bunkou et al. do not explicitly teach using high-speed communication. However, one having ordinary skill in the art will know that the network configurations usually comprise high-

Art Unit: 3744

speed communication. Example of this can be seen by Roh, where Roh teaches using leased communication line (50) for connecting outdoor unit with the system controller (C-3; L-7-10) and provides high-speed communication (40) via a server (C-3; L-2-6). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a high speed communication as taught by Roh, in Bunkout et al. system in order to transfer data faster. Bunkou et al. do not explicitly teach a blocking filter in view of Roh. Polkinghorne teaches using a blocking filter (22) disposed in the power line (C-8, L-36-38). It is well known in the art that the blocking filters are commonly used to protect electronic load from surges, transients, and they often provide noise filtering. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Bunkou et al. so that it includes a blocking filter as taught by Polkinghorne in order to advantageously protect the electrical equipments in the system.

In regard to claim 12, Bonkou et al. supply electric power to the indoor unit through a single-phase power line and to the outdoor unit through three-phase power line. Fig. 1 of Bunkou et al. shows that the single-phase power line is marked as (//) and the three-phase power line is marked as (///). The single-phase power line is connected with three-phase power line through leased communication path (0015, line 12-15).

In regard to claim 13, Bunkou et al. teach that the bridge (6) provides protocol converting means (0015, line 8-12).

In regard to claim 14, Bunkou et al. teach that the bridge (6) is served to pass only the data oriented for the indoor unit being connected with power line from the leased communication line to the power line side (0035, line 4-8).

Response to Arguments

6. Applicant's arguments with respect to claims 11-14 have been considered but are moot in view of the new ground(s) of rejection.

Summary of Arguments

1. Applicant argues the rejection under 35 U.S.C. 103(a) under Bunkou et al. in view of Roh and further in view of Masui et al. regards to claim 11 by amending the claims and adding a new limitation of a blocking filter.

Response to Arguments

1. The arguments of the rejection under 35 U.S.C. 103(a) under Bunkou et al. in view of Roh and further in view of Masui et al. regards to claim 11 is moot in view of the new grounds of rejection under 35 U.S.C. 103(a) under Bunkou et al. (JP-A-2002-243248) in view of Roh (6,430,953), and further in view of Polkinghorne (4,843,833). The new limitation of a blocking filter to the claim 11 is taught by Polkinghorne and therefore, applicant's argument is not persuasive.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huseyin Koca whose telephone number is (571) 272-3048. The examiner can normally be reached on Monday - Friday 9:00AM to 4:00PM.

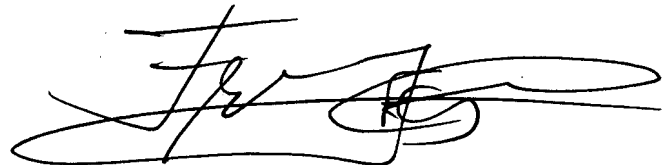
9. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834 or Frantz Jules (571) 272-6681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3744

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HK/

FRANTZ JULES
SUPERVISORY PATENT EXAMINER

A handwritten signature in black ink, appearing to read 'Frantz Jules', with a large, stylized flourish extending from the end of the name.